

SEQUENCE LISTING

<110> E.I. du Pont de Nemours and Company, Inc.
Huang, Lixuan
Xue, Zhixiong

<120> DNA and Amino Acid Sequences of a Tyrosine Ammonia Lyase Enzyme
from the Bacterium Rhodobacter sphaeroides

<130> CL2169 US NA

<160> 7

<170> PatentIn version 3.2

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<212> PRT
<213> T. cutaneum

<400> 1

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Ala His Ser Gln Ala Thr Lys Thr Val Ser Ile Asp Gly His Thr Met
35 40 45

Lys Val Gly Asp Val Val Ala Val Ala Arg His Gly Ala Lys Val Glu
50 55 60

Leu Ala Ala Ser Val Ala Gly Pro Val Arg Ala Ser Val Asp Phe Lys
65 70 75 80

Glu Ser Lys Lys His Thr Ser Ile Tyr Gly Val Thr Thr Gly Phe Gly
85 90 95

Gly Ser Ala Asp Thr Arg Thr Ser Asp Thr Glu Ala Leu Gln Ile Ser
100 105 110

Leu Leu Glu His Gln Leu Cys Gly Phe Leu Pro Thr Asp Ala Thr Tyr
115 120 125

Glu Gly Met Leu Leu Ala Ala Met Pro Ile Pro Ile Val Arg Gly Ala
130 135 140

Met Ala Val Arg Val Asn Ser Cys Val Arg Gly His Ser Gly Val Arg
145 150 155 160

Leu Glu Val Leu Gln Ser Phe Ala Asp Phe Ile Asn Arg Gly Leu Val
165 170 175

Pro Cys Val Pro Leu Arg Gly Thr Ile Ser Ala Ser Gly Asp Leu Ser
180 185 190

Pro Leu Ser Tyr Ile Ala Gly Ala Ile Cys Gly His Pro Asp Val Lys
195 200 205

Val Phe Asp Thr Ala Ala Ser Pro Pro Thr Val Leu Thr Ser Pro Glu
210 215 220 ,
225 Ala Ile Ala Lys Tyr Gly Leu Lys Thr Val Lys Leu Ala Ser Lys Glu
230 235 240

Gly Leu Gly Leu Val Asn Gly Thr Ala Val Ser Ala Ala Ala Gly Ala
245 250 255

Leu Ala Leu Tyr Asp Ala Glu Cys Leu Ala Ile Met Ser Gln Thr Asn
260 265 270

Thr Val Leu Thr Val Glu Ala Leu Asp Gly His Val Gly Ser Phe Ala
275 280 285

Pro Phe Ile Gln Glu Ile Arg Pro His Ala Gly Gln Ile Glu Ala Ala
290 295 300

Arg Asn Ile Arg His Met Leu Gly Gly Ser Lys Leu Ala Val His Glu
305 310 315 320

Glu Ser Glu Leu Leu Ala Asp Gln Asp Ala Gly Ile Leu Arg Gln Asp
325 330 335

Arg Tyr Ala Leu Arg Thr Ser Ala Gln Trp Ile Gly Pro Gln Leu Glu
340 345 350

Ala Leu Gly Leu Ala Arg Gln Gln Ile Glu Thr Glu Leu Asn Ser Thr
355 360 365

Thr Asp Asn Pro Leu Ile Asp Val Glu Gly Gly Met Phe His His Gly
370 375 380

Gly Asn Phe Gln Ala Met Ala Val Thr Ser Ala Met Asp Ser Ala Arg
385 390 395 400

Ile Val Leu Gln Asn Leu Gly Lys Leu Ser Phe Ala Gln Val Thr Glu
405 410 415

Leu Ile Asn Cys Glu Met Asn His Gly Leu Pro Ser Asn Leu Ala Gly
420 425 430

Ser Glu Pro Ser Thr Asn Tyr His Cys Lys Gly Leu Asp Ile His Cys
435 440 445

Gly Ala Tyr Cys Ala Glu Leu Gly Phe Leu Ala Asn Pro Met Ser Asn
450 455 460

His Val Gln Ser Thr Glu Met His Asn Gln Ser Val Asn Ser Met Ala
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Phe Ala Ser Ala Arg Arg Thr Met Glu Ala Asn Glu Val Leu Ser Leu
485 490 495

Leu Leu Gly Ser Gln Met Tyr Cys Ala Thr Gln Ala Leu Asp Leu Arg
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Val Met Glu Val Lys Phe Lys Met Ala Ile Val Lys Leu Leu Asn Glu
515 520 525

Thr Leu Thr Lys His Phe Ala Ala Phe Leu Thr Pro Glu Gln Leu Ala
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Lys Leu Asn Thr His Ala Ala Ile Thr Leu Tyr Lys Arg Leu Asn Gln
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Thr Pro Ser Trp Asp Ser Ala Pro Arg Phe Glu Asp Ala Ala Lys His
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Leu Val Gly Val Ile Met Asp Ala Leu Met Val Asn Asp Asp Ile Thr
580 585 590

Asp Leu Thr Asn Leu Pro Lys Trp Lys Lys Glu Phe Ala Lys Glu Ala
595 600 605

Gly Asn Leu Tyr Arg Ser Ile Leu Val Ala Thr Thr Ala Asp Gly Arg
610 615 620

Asn Asp Leu Glu Pro Ala Glu Tyr Leu Gly Gln Thr Arg Ala Val Tyr
625 630 635 640

Glu Ala Val Arg Ser Glu Leu Gly Val Lys Val Arg Arg Gly Asp Val
645 650 655

Ala Glu Gly Lys Ser Gly Lys Ser Ile Gly Ser Ser Val Ala Lys Ile
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Val Glu Ala Met Arg Asp Gly Arg Leu Met Gly Ala Val Gly Lys Met
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Phe

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Ala Arg Ile Val Leu Ala Pro Pro Ala Arg Asp Arg Cys Arg Ala Ser
35 40 45

Glu Ala Arg Leu Gly Ala Val Ile Arg Glu Ala Arg His Val Tyr Gly
50 55 60

Leu Thr Thr Gly Phe Gly Pro Leu Ala Asn Arg Leu Ile Ser Gly Glu
65 70 75 80

Asn Val Arg Thr Leu Gln Ala Asn Leu Val His His Leu Ala Ser Gly
85 90 95

Val Gly Pro Val Leu Asp Trp Thr Thr Ala Arg Ala Met Val Leu Ala
100 105 110

Arg Leu Val Ser Ile Ala Gln Gly Ala Ser Gly Ala Ser Glu Gly Thr
115 120 125

Ile Ala Arg Leu Ile Asp Leu Leu Asn Ser Glu Leu Ala Pro Ala Val
130 135 140

Pro Ser Arg Gly Thr Val Gly Ala Ser Gly Asp Leu Thr Pro Leu Ala
145 150 155 160

His Met Val Leu Cys Leu Gln Gly Arg Gly Asp Phe Leu Asp Arg Asp
165 170 175

Gly Thr Arg Leu Asp Gly Ala Glu Gly Leu Arg Arg Gly Arg Leu Gln
180 185 190

Pro Leu Asp Leu Ser His Arg Asp Ala Leu Ala Leu Val Asn Gly Thr
195 200 205

Ser Ala Met Thr Gly Ile Ala Leu Val Asn Ala His Ala Cys Arg His
210 215 220

Leu Gly Asn Trp Ala Val Ala Leu Thr Ala Leu Leu Ala Glu Cys Leu
225 230 235 240

Arg Gly Arg Thr Glu Ala Trp Ala Ala Ala Leu Ser Asp Leu Arg Pro
245 250 255

His Pro Gly Gln Lys Asp Ala Ala Ala Arg Leu Arg Ala Arg Val Asp
260 265 270

Gly Ser Ala Arg Val Val Arg His Val Ile Ala Glu Arg Arg Leu Asp
275 280 285

Ala Gly Asp Ile Gly Thr Glu Pro Glu Ala Gly Gln Asp Ala Tyr Ser
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